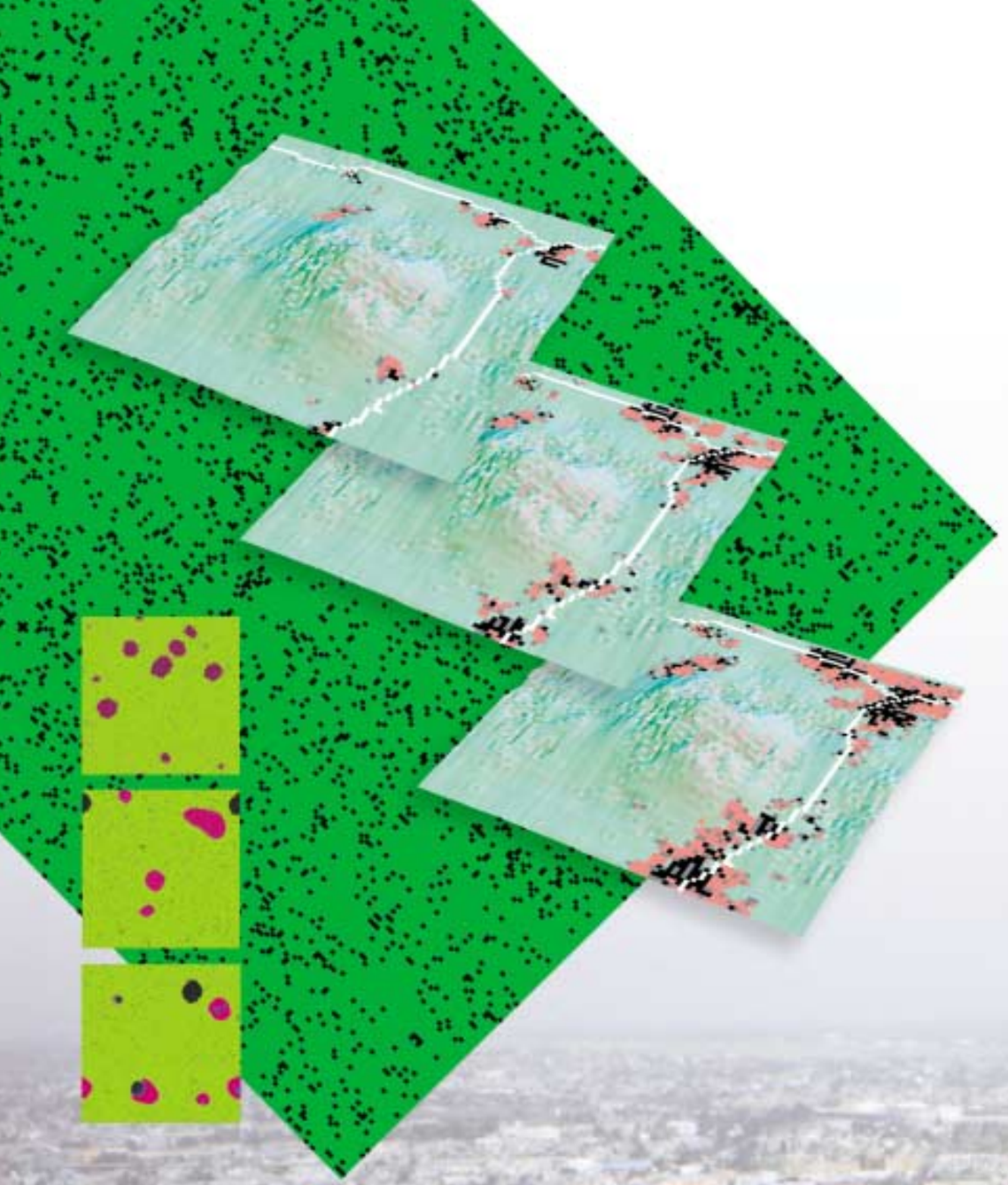

Urban Security

All cities, regardless of size, have a set of inter-related problems associated with safety, sustainability, growth, energy distribution and usage, water supply, transportation, food and goods distribution, micro- and regional economics, the environment, and the quality of life. An understanding of the links and feedback between the components making up the urban system allows us to better evaluate vulnerabilities related to natural hazards such as a hurricane or an unnatural event, such as a terrorist attack. The same linked systems must be understood to plan sustainable cities. To understand urban systems demands multidisciplinary approaches that account for physical processes, economic and social factors, and nonlinear feedback across a broad range of scales and disparate process phenomena. Strong research programs in the defense, environmental, and computational arenas at the Los Alamos National Laboratory have developed many state-of-the-art models that are serving as components of an urban modeling system. The Los Alamos Urban Security team's goal has been a scientific understanding of urban systems and the ability to simulate cities and their interaction with the physical environment through linked subsystems.